Corrigendum

The Quark-Gluon-Plasma Liquid
Markus H. Thoma
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The estimate of the Coulomb coupling parameter Γ contains an error. In QCD, where the Heavyside-Lorentz units are used, the Coulomb potential has to be divided by a factor 4π compared to CGS units [1]. Hence the correct Coulomb coupling parameter reads $\Gamma = Cg^2/(4\pi dT)$. Taking into account the magnetic interaction which is of the same magnitude as the electric interaction in an ultrarelativistic plasma, the coupling parameter is reduced by about a factor of 6. Consequently we obtain $\Gamma = 1.5$-5 in a QGP at $T \simeq 200$ MeV. Such a value still indicates that the QGP is in the liquid phase. However, the phase transition to the gas phase, assumed to happen at $\Gamma_c \simeq 1$, takes place now at a few times of the transition temperature from the hadronic phase to the QGP. Hence it might be possible that the gas-liquid transition occurs during the expansion of the fireball in nucleus-nucleus collisions at LHC [2]. The phase transition from the QGP liquid to the QGP gas expands the phase diagram of strongly interacting matter to high temperatures. This phase transition ends at a critical point, above which a supercritical fluid exists.

The estimate of the cross section enhancement is also affected by the above error. The Coulomb radius should also be divided by a factor of 6, leading to $\rho = 0.2$-1 fm. Then $\beta = \rho/\lambda_D = 1$-5 which gives a maximum impact parameter of $(1.4\text{-}3.3)\lambda_D$, from which, using equation (2), a cross section enhancement of a factor of 2 to 9 results.

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[1] J.D. Jackson, *Classical Electrodynamics*, (John Wiley, New York, 1975).
[2] A. Peshier, private communication.